of New Guinea received the members of the expedition with a courtesy and kindness which contributed materially to its success.

The expedition was under the leadership of Dr. Alfred G. Mayer, with whom were associated Dr. Hubert Lyman Clark, of Harvard, Dr. E. Newton Harvey, of Princeton, Frank A. Potts, of Cambridge University, Professor D. H. Tennent, of Bryn Mawr College, and Mr. E. M. Grosse, of Sydney, whose excellent colored drawings served to illustrate the living aspects of the echinoderms which were collected by Dr. Clark.

The expedition was well equipped with apparatus and provided with a naptha launch, Mr. John Mills, of the department of marine biology, being the engineer.

For littoral echinoderms there is probably no richer region in the world than that of the Murray Islands, lying as they do about 70 miles south of New Guinea and within 6 miles of the outer line of the Great Barrier Reef of Australia. At Maer Island alone Dr. Clark collected about 150 species of echinoderms, and about 100 of these were beautifully figured by Mr. Grosse. Clark also found that crinoids are more active than has been generally supposed, some species being able to swim actively through the water.

Professor Tennent succeeded in effecting a cross between a male crinoid and the echini, and at Badu Island he obtained abundant material upon echinoderm crosses for an extensive cytological study.

Dr. Harvey found a holothurian, certain living pigments of which change purple in alkalis and red in acids, and he was thus enabled to determine the relation between the rate of penetration and the degree of dissociation of electrolytes.

Mr. Potts conducted several interesting ecological studies upon the habits of crustacea, and Dr. Mayer made an intensive study of the coral reefs, discovering that temperature is a factor of primary importance in determining the growth of corals. Those corals which are most resistant to high temperatures are those which are best able to withstand being buried beneath the mud, and this suggests that high temperature produces death by asphyxiation.

Certain coral beds at Thursday Island, Cape York, Australia, which were measured and photographed by Saville-Kent in 1890 were remeasured in 1913 and species of Porites and Symphyllia were found to have grown in diameter at an average rate of 1.8 to 1.98 inches per annum, or about 44 inches in 23 years.

The health of the members of the expedition was good throughout the period of their investigations, and some interesting papers may be expected to be published by the Carnegie Institution of Washington as a result of their studies.

SCIENTIFIC NOTES AND NEWS

DR. CHARLES RICHET, professor of physiology at the University of Paris, has been elected a member of the section of medicine and surgery of the Paris Academy of Sciences to replace the late Dr. Lucas-Championnière.

PROFESSOR L. MANOUVRIER, Paris; Professor Karl von den Steinen, Berlin; Dr. Alfred P. Maudslay, London; his Excellency W. Radloff, St. Petersburg, and Professor Émile Cartailhac, Toulouse, have been elected to honorary membership in the American Anthropological Association.

DR. CARL HUGO KRONECKER, professor of physiology at Berne, celebrated his seventy-fifth birthday on January 27.

OFFICERS of the Cincinnati Research Society have been elected as follows: *President,* Dr. Oscar Berghausen; *Vice-president,* Dr. E. R. Remelin; *Secretary,* Dr. J. L. Tuechter; *Executive Committee,* Dr. H. McE. Knower and Dr. Charles Goosman.

THE Syracuse chapter of Sigma Xi has initiated as non-resident members: Dr. Robert S. Breed and Dr. Ulysses P. Hedrick, of the New York Agricultural Experiment Station, and Dr. William J. Miller, of Hamilton College.

PROFESSOR C. E. SHERMAN, of the civil engineering department of the Ohio State University, has undertaken a complete examination on the summit level of the Ohio canal through

Akron, with a view to determining the availability of its waters for steam, sanitary, water supply power, and such other purposes as may be found advisable.

Dr. Georg Aulmann, assistant in the Royal Zoological Museum at Berlin, has been called to the directorship of the Natural History Museum at Düsseldorf.

Professor H. T. Barnes, of McGill University, lectured before a general meeting of the New York Academy of Sciences on February 16, his subject being "The Physical Effects Produced by Icebergs in the North Atlantic."

The Society for Biological Research of the University of Pittsburgh held its first open meeting of the year 1913–14, on January 29, at which time Dr. Ross G. Harrison, of Yale University, addressed the society on "The Life of Tissues Outside the Organism."

Dr. Joseph Jastrow, professor of psychology in the University of Wisconsin, gave the opening convocation address at the University of Missouri on February 4, on "Theory and Practise."

Dr. Charles Sedgwick Minot, of Harvard University, made one of the addresses at the thirty-second annual banquet of the faculty and students of McGill University.

The next convocation orator at the University of Chicago will be Professor James Rowland Angell, head of the department of psychology and dean of the faculties of arts, literature and science in the university.

Dr. Wolfgang Ostwald, of the University of Leipzig, has delivered at the University of Chicago a series of five lectures on the subject of "Colloidal Chemistry."

Professor Vladimir Karapetoff, of the electrical department of Cornell University, has returned from a trip to Washington, D. C., where he delivered four two-hour lectures before the engineer officers of the United States Army, Washington Barracks. The lectures were given on February 5, 6 and 7, and the subjects treated were "Alternating Currents," "Theory of Electrical Machinery," "Design of Electrical Machinery," and "The Fundamentals of the Magnetic Circuit." Lieutenant Atkisson, who is in charge of electrical and mechanical engineering, and his assistant, Lieutenant Lampert, are former students of Professor Karapetoff's at Cornell.

The Mendelian Society of Vienna has celebrated the thirtieth anniversary of Mendel's death by opening a new institute devoted to research in heredity.

Dr. Roswell Park, professor of surgery at the University of Buffalo, a distinguished surgeon and scientific author, died suddenly on February 15, aged sixty-two years.

Dr. Albert Charles Lewis Gotthilf Günther, late keeper of zoology in the British Museum (Natural History), distinguished for his contributions to zoology, especially for his work on fishes, died on February 1 at his residence at Kew Gardens, in his eighty-fourth year.

Dr. Eduard Huber, professor of Indo-Chinese philology in the French School at Hanoi, has died at the age of thirty-four years, while engaged in an expedition to Cochin China.

Dr. Fritz Jummersbach, professor of agriculture at Munich, has died at the age of fifty-six years.

Dr. Karl Albert Neufeld, of the University of Würzburg, assistant director of the food laboratory, has died at the age of forty-eight years.

The U. S. Civil Service Commission announces an examination for technical assistant in malaria investigations to fill vacancies in this position in the Public Health Service, for duty in the field, at entrance salaries ranging from $1,800 to $2,200 a year. The duties of this position will be to conduct laboratory studies of malaria, to make surveys of malarial regions, and to advise in respect to the prevention of the disease. It is desired to secure persons thoroughly competent to make thick and thin blood smears, stain the same and identify the plasmodium of malaria in all its stages in such preparations.

The U. S. Civil Service Commission also announces an examination for geologic aid and assistant geologist, for both men and wo-

men, on March 11–12, 1914, to fill vacancies as they may ocur in these positions in the U. S. Geological Survey, at salaries ranging from $60 a month when actually employed to $1,500 a year.

COMPETITIVE examinations for the position of sanitary supervisor, New York State Department of Health, will be held in various cities throughout the state, on March 7, 1914. Open to men and women. Application blanks must be filed in the office of the civil service commission on or before March 2, 1914. The following conditions are prescribed for candidates: (1) They shall be physicians. (2) They shall when appointed be not less than twenty-eight nor more than sixty years of age. (3) They shall either (*a*) have served as a health officer of a city, town or village having a population of not less than 3,000 persons, for a period of at least four years; or (*b*) shall have received instruction approved by the Public Health Council, or a duly authorized committee thereof, in sanitary science, including five hours' instruction per week during the school year, in an educational institution, and shall have had at least two years' experience in public health work; or (*c*) shall have received a degree, certificate or diploma in public health granted after the completion of a course approved by the Public Health Council, in an educational institution, and at least one year's practical experience in public health work; or (*d*) shall have submitted proof satisfactory to the Public Health Council, or a duly authorized committee thereof, that they have actually engaged in some form of public health work for a period of at least two years. (4) They shall not be allowed to engage in the regular practise of medicine or in any other regular occupation or business; but they shall be at liberty to retain or accept other positions in public health work, such as local health officer, teaching public health and related subjects, or other kindred lines of work. The State Department of Health, however, retains the right to determine at any time whether the extent of such other work interferes with the proper performance of his duties as sanitary supervisor. The State Department of Health has fixed the salaries of sanitary supervisors at $4,000 per annum, each sanitary supervisor being required out of this sum to incur all expenditures for traveling expenses which may be necessary to enable him to efficiently perform his duties in all parts of his district.

A CONFERENCE will assemble in Rome on February 24 and subsequent days to consider the question of an international convention for the control of plant diseases and the regulation of the importation of plants. It is described as a phytopathological conference, and is to be held at the International Institute of Agriculture. About fifteen countries are expected to be represented. Invitations were issued by the French government rather more than a year ago to a conference of this kind in connection with the general assembly of the International Agricultural Institute. In view, however, of the small number of acceptances received in time to arrange the meeting, the conference was postponed for a year.

THE Vienna correspondent of the *Journal* of the American Medical Association reports that by the bequest of $300,000 under the will of the late Professor Leegen, a former member of the Vienna medical faculty, the Academy of Sciences of Vienna has obtained means to erect a special institute for physiology. The idea is to devote the institute to scientific research solely; no beginners will be admitted, and the men working there will be appointed as whole-time officers, who may *not* devote their time to any other office—as teachers in universities or hospitals. Furthermore, the academy has obtained also the Vienna Biologic Institute, together with a handsome sum to keep it going, from its founders and present owners. From this institute emanated the biological discoveries by Drs. Kammerer and Pribram and now, in connection with the above-mentioned "Leegen institute," experimental physiology on a large scale, for purely scientific purposes, will be possible in Vienna, apart from the research going on in the university laboratories.

THE errors of the noon and 10 P.M. time signals as sent out by the Naval Observatory during the month of January, 1914, were as follows:

January Day	Error Noon	10 P.M.
1	−.04	−.04
2	−.03	−.03
3	+.01	
4	+.01	+.02
5	+.04	+.04
6	+.07	+.05
7	+.07	+.06
8	.00	−.02
9	−.06	−.05
10	−.04	−.06
11	−.05	−.05
12	−.06	−.08
13	−.09	+.02
14	+.05	+.06
15	+.07	+.11
16	+.10	+.10
17	+.03	−.11
18	.00	−.03
19	.00	−.01
20	.00	−.03
21	−.01	−.01
22	−.03	−.03
23	−.03	−.06
24	−.00	+.04
25	+.04	+.07
26	+.05	+.07
27	+.11	+.07
28	+.05	+.04
29	+.07	+.09
30	−.23	+.14
31	+.16	+.19

THE January number of the *Brooklyn Botanic Garden Record* contains a prospectus of courses to be offered by the Botanic Garden during 1914. There are 29 different courses, ranging from children's gardens and nature study to research work in plant physiology, mycology and plant pathology and genetics, and including courses in introductory botany, seven courses in household botany and horticulture, a course for the training of teachers of children's gardens, comprising nine different sub-courses, extending from January to October, and advanced botanical courses in plant pathology, fresh water microbiology, cytology, experimental evolution and phytogeography. In addition to the regular courses of instruction, there are also announced four courses of public lectures, two for children and two for adults, together with a statement of ways in which the Botanic Garden is prepared to cooperate with local schools in their botanical and nature study work. Classes in botany from high schools in Brooklyn are now using the equipment of the Botanic Garden, in some cases being taught at the Garden by their own teachers, and in other cases by members of the Garden staff, appointed especially for this work.

THE city of Columbus and the State University have cooperated in the Columbus Horticultural Society, which is one of the oldest organizations of its kind in the United States, having been organized in 1845. The regular annual meeting was held in the new archeological and historical museum on the university campus, December 27, 1913. Professor William R. Lazenby was reelected president; H. Warren Phelps, vice-president; L. M. Montgomery, secretary; W. C. Mills, treasurer. The society has invested funds amounting to $6,000. It publishes a volume of its proceedings each year.

SOME of the acacias, a group of trees with a world-circling range, are so valuable as a source of tannin and timber, says the Department of Agriculture in a bulletin recently issued, that their commercial cultivation in certain portions of the United States may prove profitable. Aside from their value for tannin and lumber, they are well adapted to the reclamation of sandy and semi-desert lands, some species being able to thrive with only three inches of rainfall. There are about 450 species of acacias, 300 of which are Australian species and the rest scattered over the world, principally in Asia, Africa and America. Australian acacias were introduced into California at about the same time the eucalypts were, and like the latter, have thrived there. Like the eucalypts they are not resistant to frost. At the present time the chief commercial value of acacias, says the department, seems to be for tanbark, although the tanbark species have important by-products. All of the leading tanbark acacias come from Australia, where they are generally known as wattles, from the fact that they were originally used for weaving and wattling the walls of huts. Actual tannin contents of the three principal tanbark acacias, as shown by analyses at the

University of California, are from 24 to 48 per cent. Oak and chestnut, the woods principally used in this country, yield from eight to thirteen per cent. of tannin. Acacia timber is beautiful in grain and durable in contact with the ground. Even the smaller species have a value for tool handles, furniture and various other useful and ornamental objects. Some of the best species yield a hard, heavy, close-grain, tough timber comparable to walnut and rosewood. In addition to tannin and timber, many of the acacias produce valuable by-products. The widely known gum arabic is derived principally from the Arabic acacia, though also from a number of Asiatic and African desert species. Cutch, an astringent gum in constant demand, is another acacia product. Many other kinds of gums are yielded by different acacia species. The flowers of still another species, known as cassie, yield a perfume, the manufacture of which at Grasse, France, the center of the perfume industry, is very profitable.

WE learn from the London *Times* that the plans of the Austrian Antarctic expedition, which it is hoped will sail from Trieste in the early summer, were set forth at a meeting held at Vienna on January 15. The principal supporter of the project is Count Hans Wilczek, to whose energies the success of the Austrian expedition which discovered Franz Josef's Land 40 years ago was largely due. Financial help is also being provided by the Academy of Sciences and the Geographical Society, but so far only about half of the required sum of over 600,000 kronen ($125,000) has been obtained. The leader of the expedition is Dr. Felix König, of Graz, who took part in the German Antarctic expedition. The ship which has been acquired is likewise that which was used in that expedition; her name, however, will be changed from *Deutschland* to *Oesterreich*. Dr. König, who is being assisted by the advice of Captain Amundsen, intends to sail from Trieste to Buenos Aires, and thence to South Georgia Island, where an intermediate station fitted with wireless telegraphic apparatus will be installed. By this means it is hoped to keep up communication between the ship, which will also be fitted with wireless, and civilization. The base is to be made close to a bay found by the German expedition in the newly discovered barrier, where it is hoped that the ship will be able to winter. The principal work will be carried out by sledge journeys, which will be made in three directions, one to the south with the object of reaching Queen Maud Mountains, the second towards Grahamland in order to try to discover its continuation southwards, and the third in the direction of the Enderby quadrant. The expedition is expected to cover two years, but provisions are being taken for three. From remarks made at the meeting by Professor Nordenskiöld the object of the expedition appears to be to discover the relations of the eastern and western section of the Antarctic regions with one another.

UNIVERSITY AND EDUCATIONAL NEWS

MRS. RUSSELL SAGE has extended her offer to give $100,000 for a new dining hall at Princeton University provided that the university raise $400,000 for the purpose.

UNDER the will of Dr. Cumberland George Herndon, two scholarships, named after the testator's father the William A. Herndon scholarships, have been founded in the department of medicine of the University of Virginia. Candidates must be unable to defray the expense of their medical education and must signify their intention of entering the medical service of the army or navy. The scholarships provide for the necessary expenses of the student during the four years of his course and will yield approximately $425–$450 per annum.

BY an agreement between the universities of St. Andrews and Bordeaux, Dr. T. Pettigrew Young, lecturer in French at St. Andrews, will proceed to Bordeaux to act as exchange professor for the month of May, while during the same period Professor Charles Cestre, of Bordeaux, will join the staff of St. Andrews University. Professor Cestre has also been commissioned by the French ministry of instruction to deliver a number of lectures on the French literature and language in various parts of Scotland and England.